

6560-50-P

### ENVIRONMENTAL PROTECTION AGENCY

#### **40 CFR Part 52**

[EPA-R08-OAR-2018-0055; FRL-9977-44-Region 8]

Interstate Transport Prongs 1 and 2 for the 2012 Fine Particulate Matter (PM<sub>2.5</sub>) Standard for Colorado, Montana, North Dakota, South Dakota and Wyoming

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve portions of State Implementation Plan (SIP) submissions from Colorado, Montana, North Dakota, South Dakota and Wyoming addressing the Clean Air Act (CAA or Act) interstate transport SIP requirements for the 2012 annual Fine Particulate Matter (PM<sub>2.5</sub>) National Ambient Air Quality Standards (NAAQS). These submissions address the requirement that each SIP contain adequate provisions prohibiting air emissions that will have certain adverse air quality effects in other states. The EPA is proposing to approve portions of these infrastructure SIPs for the aforementioned states as containing adequate provisions to ensure that air emissions in the states will not significantly contribute to nonattainment or interfere with maintenance of the 2012 annual PM<sub>2.5</sub> NAAQS in any other state.

**DATES:** Comments must be received on or before [insert date 30 days after date of publication in the Federal Register].

**ADDRESSES:** Submit your comments, identified by Docket ID No EPA-R08-OAR-2018-0055 at *http://www.regulations.gov*. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from www.regulations.gov. The EPA may

publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (i.e., on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <a href="http://www2.epa.gov/dockets/commenting-epa-dockets">http://www2.epa.gov/dockets/commenting-epa-dockets</a>. FOR FURTHER INFORMATION CONTACT: Adam Clark, Air Program, U.S. EPA Region 8, (303) 312-7104, clark.adam@epa.gov.

### SUPPLEMENTARY INFORMATION:

### I. Background

On December 14, 2012, the EPA revised the primary annual PM<sub>2.5</sub> NAAQS to 12.0 micrograms per cubic meter (µg/m³). *See* 78 FR 3086 (January 15, 2013). An area meets the standard if the three-year average of its annual average PM<sub>2.5</sub> concentration (at each monitoring site in the area) is less than or equal to 12.0 µg/m³. The CAA requires states to submit, within three years after promulgation of a new or revised standard, SIPs meeting the applicable "infrastructure" elements of sections 110(a)(1) and (2). One of these applicable infrastructure elements, CAA section 110(a)(2)(D)(i), requires SIPs to contain "good neighbor" provisions to prohibit certain adverse air quality effects on neighboring states due to interstate transport of pollution.

Section 110(a)(2)(D)(i) includes four distinct components, commonly referred to as "prongs," that must be addressed in infrastructure SIP submissions. The first two prongs, which are codified in section 110(a)(2)(D)(i)(I), are provisions that prohibit any source or other type of emissions activity in one state from contributing significantly to nonattainment of the NAAQS in another state (prong 1) and from interfering with maintenance of the NAAQS in another state (prong 2). The third and fourth prongs, which are codified in section 110(a)(2)(D)(i)(II), are provisions that prohibit emissions activity in one state from interfering with measures required to prevent significant deterioration of air quality in another state (prong 3) or from interfering with measures to protect visibility in another state (prong 4).

In this action, the EPA is proposing to approve the prong 1 and prong 2 portions of infrastructure SIP submissions submitted by: Colorado on December 1, 2015; Montana on December 17, 2015; North Dakota on August 23, 2015; South Dakota on January 25, 2016; and Wyoming on June 24, 2016, as containing adequate provisions to ensure that air emissions in these states will not significantly contribute to nonattainment or interfere with maintenance of the 2012 annual PM<sub>2.5</sub> NAAQS in any other state. All other applicable infrastructure SIP requirements for these SIP submissions have been addressed in separate rulemakings. <sup>1</sup>

## II. Relevant Factors to Evaluate 2012 PM<sub>2.5</sub> Interstate Transport SIPs

We review each state's submission to see how it evaluates the transport of air pollution to other states for a given air pollutant, the types of information the state used in its analysis, how

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<sup>&</sup>lt;sup>1</sup> See 82 FR 39030, August 17, 2017 (Colorado); 81 FR 23180, April 20, 2016 (Montana); 82 FR 46681, October 6, 2017 (North Dakota); 82 FR 38832, August 16, 2017 (South Dakota); 82 FR 18992, April 25, 2017, and 82 FR 9142, February 3, 2017 (Wyoming).

that analysis compares with prior EPA rulemakings, modeling, and guidance, and the conclusions drawn by the state.

The EPA has developed a consistent framework for addressing interstate transport with respect to the PM<sub>2.5</sub> NAAQS. This framework includes the following four steps: 1) Identify downwind areas that are expected to have problems attaining or maintaining the NAAQS; 2) Identify which upwind states contribute to these air quality problems in amounts sufficient to warrant further review and analysis; 3) Identify any emissions reductions necessary to prevent an identified upwind state from significantly contributing to downwind nonattainment or interfering with downwind maintenance of the NAAQS; and 4) Adopt permanent and enforceable measures needed to achieve those emissions reductions.

To help states identify the receptors expected to have problems attaining or maintaining the 2012 annual PM<sub>2.5</sub> NAAQS, the EPA released a memorandum titled, "Information on the Interstate Transport 'Good Neighbor' Provision for the 2012 Fine Particulate Matter National Ambient Air Quality Standards under Clean Air Act Section 110(a)(2)(D)(i)(I)" on March 17, 2016 (hereon "2016 Memo"). The 2016 Memo provides projected future year annual PM<sub>2.5</sub> design values for monitors throughout the country based on quality assured and certified ambient monitoring data and recent air quality modeling and explains the methodology used to develop these projected design values. The 2016 Memo also describes how the projected values can be used to help determine which monitors should be further evaluated as potential receptors under step 1 of the interstate transport framework described above, and how to determine whether

<sup>&</sup>lt;sup>2</sup> This memorandum is available in the docket and at https://www.epa.gov/sites/production/files/2016-08/documents/good-neighbor-memo implementation.pdf.

emissions from other states significantly contribute to nonattainment or interfere with maintenance of the 2012 annual PM<sub>2.5</sub> NAAQS at these monitoring sites.

To develop the projected values presented in the 2016 Memo, the EPA used the results of nationwide photochemical air quality modeling that it recently performed to support several ozone NAAQS-related rulemakings. Base year modeling was performed for 2011. Future year modeling was performed for 2017 to support the Cross-State Air Pollution Rule (CSAPR)

Update for the 2008 Ozone NAAQS. *See* 81 FR 74504 (October 26, 2016). Future year modeling was performed for 2025 to support the Regulatory Impact Assessment of the final 2015 Ozone NAAQS. In addition, and relevant to this proposed action on interstate transport SIPs for the 2012 annual PM<sub>2.5</sub> NAAQS, the outputs from these model runs included hourly concentrations of PM<sub>2.5</sub> that were used in conjunction with measured data to project annual average PM<sub>2.5</sub> design values for 2017 and 2025.

Areas that were designated as moderate PM<sub>2.5</sub> nonattainment areas for the 2012 annual PM<sub>2.5</sub> NAAQS in 2014 must attain the NAAQS by December 31, 2021, or as expeditiously as practicable. Since modeling results are only available for 2017 and 2025, the 2016 Memo explains that one way to assess potential receptors for 2021<sup>4</sup> is to assume that receptors projected to have average and/or maximum design values above the NAAQS in both 2017 and 2025 are also likely to be either nonattainment or maintenance receptors in 2021. Similarly, the EPA

<sup>&</sup>lt;sup>3</sup> See 2015 ozone NAAQS RIA at: http://www3.epa.gov/ozonepollution/pdfs/20151001ria.pdf.

<sup>&</sup>lt;sup>4</sup> Assessing downwind PM<sub>2.5</sub> air quality problems based on estimates of air quality concentrations in a future year aligned with the relevant attainment deadline is consistent with the instructions from the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) in *North Carolina v. EPA*, 531 F.3d 896, 911-12 (D.C. Cir. 2008), that upwind emission reductions should be harmonized, to the extent possible, with the attainment deadlines for downwind areas.

stated that it may be reasonable to assume that receptors that are projected to attain the NAAQS in both 2017 and 2025 are also likely to be attainment receptors in 2021. Where a potential receptor is projected to be nonattainment or maintenance in 2017, but projected to be attainment in 2025, further analysis of the emissions and modeling may be needed to make a further judgement regarding the receptor status in 2021.

Based on this approach, the EPA identified 19 potential nonattainment and/or maintenance receptors. All of the 17 potential nonattainment receptors are located in California. One of the potential maintenance-only receptors is located in Shoshone County, Idaho, and the other potential maintenance-only receptor is located in Allegheny County, Pennsylvania.

In the 2016 Memo, the EPA noted that because of data quality problems, nonattainment and maintenance projections were not done for all or portions of Florida, Illinois, Idaho, Tennessee and Kentucky. Data quality problems were since resolved for Tennessee, Kentucky and Florida, identifying no additional potential receptors, with those areas having design values below the 2012 annual PM<sub>2.5</sub> NAAQS and expected to maintain the NAAQS due to downward emission trends for NO<sub>x</sub> and SO<sub>2</sub> (<a href="www.epa.gov/air-trends/air-quality-design-values">www.epa.gov/air-trends/air-quality-design-values</a> and <a href="www.epa.gov/air-emissions-inventories/air-pollutant-emissions-trends-data">www.epa.gov/air-emissions-inventories/air-pollutant-emissions-trends-data</a>). Recent ambient data from 2015 and 2016 for Idaho and Illinois indicated that violations of the 2012 annual PM<sub>2.5</sub> NAAQS in the areas with previous data quality issues are unlikely. Considering this information, the very low background concentrations recorded at IMPROVE monitoring site locations in Idaho, and the continuing downward trend of annual PM<sub>2.5</sub> levels at monitors across Illinois, we

propose that the Idaho and Illinois areas should not be considered receptors for purposes of the 2012 annual  $PM_{2.5}$  NAAQS.<sup>5</sup>

After identifying potential receptors, the next step is to identify whether upwind states contribute to air pollution at each of the identified receptors in other states. In the 2016 Memo, the EPA did not calculate the portion of any downwind state's predicted PM<sub>2.5</sub> concentrations that would result from emissions from individual states. Accordingly, the EPA will evaluate prong 1 and 2 submissions for states using a weight of evidence analysis. This analysis is based on a review of the state's submission and other available information, including air quality trends; topographical, geographical, and meteorological information; local emissions in downwind states and emissions from the upwind state; contribution modeling from prior interstate transport analyses; and existing and planned emission control measures in the state of interest. While none of these factors is by itself dispositive, together they may be used in weight of evidence analyses to determine whether the emissions from each of the five states that are the subject of this notice will significantly contribute to nonattainment or interfere with maintenance of the 2012 annual PM<sub>2.5</sub> NAAQS at the identified receptors in the 2016 Memo.

## III. States' Submissions and the EPA's Analysis

In this section, we provide an overview of each state's 2012 annual PM<sub>2.5</sub> transport analysis, as well as a summary of the EPA's evaluation of prongs 1 and 2 for each state. A detailed discussion of our evaluations can be found in the Technical Support Documents (TSDs)

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<sup>&</sup>lt;sup>5</sup> These data quality issues are addressed in more detail in the technical support documents (TSDs) for this rulemaking, which can be found in the docket.

for this action, with separate TSDs for each of the five states. The TSDs can be accessed through www.regulations.gov (e-docket EPA-R08-OAR-2018-0055).

Colorado: Colorado concluded that it does not contribute significantly to nonattainment or interfere with maintenance of the 2012 annual PM<sub>2.5</sub> NAAQS in any other state for the following reasons: 1) Colorado has never violated the 2012 PM<sub>2.5</sub> NAAQS; 2) The nearest downwind nonattainment area is about 900 miles from Colorado's eastern border, <sup>6</sup> and the nearest upwind nonattainment area is about 600 miles from Colorado's western border; and 3) Colorado has an EPA-approved Regional Haze State Implementation Plan that will result in substantial future reductions of PM<sub>2.5</sub> and its precursors.

The EPA notes that, because Colorado's analysis focused on designated nonattainment areas, it does not independently address whether the SIP contains adequate provisions prohibiting emissions that will interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS in any other state. In remanding the Clean Air Interstate Rule (CAIR) to the EPA in *North Carolina v. EPA*, the D.C. Circuit explained that the regulating authority must give the "interfere with maintenance" clause of section 110(a)(2)(D)(i)(I) "independent significance" by evaluating the impact of upwind state emissions on downwind areas that, while currently in attainment, are at risk of future nonattainment, considering historic variability. While Colorado's submittal predates the 2016 Memo, which provided the states with information about potential maintenance-only receptors, Colorado was still required to evaluate the potential impact of its emissions on

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<sup>&</sup>lt;sup>6</sup> Colorado was referring to the Floyd County, Indiana area. The EPA did not consider transport to this area as part of this action because no receptors in the area were projected as nonattainment or maintenance monitors in the 2016 Memo.

<sup>&</sup>lt;sup>7</sup> 531 F.3d 896, 910–11 (D.C. Cir. 2008) (holding that the EPA must give "independent significance" to each prong of CAA section 110(a)(2)(D)(i)(I)).

areas that are currently measuring clean data, but that may have issues maintaining that air quality, and Colorado did not do so.

The EPA reviewed the information in Colorado's submittal, as well as the 2016 Memo and additional supplemental information for our evaluation, and we propose to come to the same conclusion as the state. This includes Colorado's conclusion that the state will not interfere with maintenance in downwind states, because we supplemented the state's analysis by identifying and assessing impacts on potential maintenance receptors. In our evaluation, we identified potential downwind nonattainment and maintenance receptors using the 2016 Memo. We then evaluated these receptors to determine whether Colorado emissions could significantly contribute to nonattainment or interfere with maintenance at them. Below, we provide an overview of our analysis. A more detailed evaluation of how the SIP revisions meet the requirements of CAA section 110(a)(2)(D)(i)(I) may be found in the Colorado TSD.

With regard to the 17 California receptors, our analysis showed that elevated PM<sub>2.5</sub> levels in California are driven primarily by local emissions. Additionally, Colorado's western border is more than 570 miles to the east and generally downwind of the California receptors, with several intervening mountain ranges which tend to impede interstate pollution transport. Finally, monitoring data demonstrate that the air in remote areas between Colorado and California is well below the level of the 2012 PM<sub>2.5</sub> NAAQS. All of these factors indicate that emissions from Colorado will not significantly contribute to nonattainment or interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS at any California projected receptors.

<sup>&</sup>lt;sup>8</sup> See "California: Imperial County, Los Angeles-South Coast Air Basin, Plumas County, San Joaquin Valley Area Designations for the 2012 Primary Annual PM<sub>2.5</sub> National Ambient Air Quality Standard Technical Support Document" in the docket for this action.

With regard to the Shoshone County, Idaho receptor, our analysis showed that elevated PM<sub>2.5</sub> levels in the area are driven primarily by local emissions from wood burning in the wintertime. Additionally, Colorado is more than 550 miles to the southeast and downwind of this receptor. Finally, monitoring data indicate that the air in remote areas between Colorado and the Idaho receptor is well below the level of the 2012 PM<sub>2.5</sub> NAAQS. All of these factors indicate that emissions from Colorado will not significantly contribute to nonattainment or interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS at the projected Shoshone County receptor.

With regard to the Allegheny County, Pennsylvania receptor, our analysis included review of previous modeling data conducted for the EPA's 2011 CSAPR, which addressed the 1997 and 2006 PM<sub>2.5</sub> NAAQS. <sup>10</sup> For the 2011 CSAPR, the EPA modeled contribution from states in the Eastern U.S. to air quality monitors (referred to as "receptors") also located in the Eastern U.S. <sup>11</sup> Therefore, the 2011 CSAPR modeling did not project downwind contribution of emissions from Colorado, but projected contributions from states immediately east of Colorado, including Kansas. This modeling indicated that Kansas, a state located much closer to the Allegheny County receptor and with higher PM<sub>2.5</sub> precursor emissions than Colorado, <sup>12</sup> was modeled to be below 1% (the contribution level at which eastern states were considered "linked" to downwind receptors in the CSAPR and CSAPR Update rulemakings) of the 2012 annual

<sup>&</sup>lt;sup>9</sup> See "Idaho: West Silver Valley Nonattainment Area- 2012 Primary Annual PM<sub>2.5</sub> National Ambient Air Quality Standard Technical Support Document" in the docket for this action.

<sup>&</sup>lt;sup>10</sup> See Table V.D-1 in the EPA's Cross-State Air Pollution Rule (CSAPR) (August 8, 2011), at 76 FR 48240.

<sup>&</sup>lt;sup>11</sup> In these rules, "Eastern" states refer to all contiguous states east of the Rocky Mountains, specifically not including: Montana, Wyoming, Colorado and New Mexico.

<sup>&</sup>lt;sup>12</sup> See Tables 7-1 and 7-2 in "Emissions Inventory Final Rule Technical Support Document (TSD)" for CSAPR, June 28, 2011, Document number EPA-HQ-OAR-2009-0491-4522 in www.regulations.gov.

PM<sub>2.5</sub> NAAQS at all receptors in the eastern U.S., including the Allegheny County receptor. Additionally, the modeling information contained in EPA's 2016 Memo shows that the Allegheny County receptor is projected to both attain and maintain the NAAQS by 2025. These factors, in addition to the very large distance (1,165 miles) from the Allegheny County receptor to the Colorado border, indicate that emissions from Colorado will not significantly contribute to nonattainment or interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS at the projected Allegheny County receptor.

Based on these analyses, the EPA is proposing to approve the SIP submittal as meeting the CAA section 110(a)(2)(D)(i)(I) requirement that Colorado emissions will not contribute significantly to nonattainment or interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS in any other state.

Montana: Montana concluded that it does not contribute significantly to nonattainment or interfere with maintenance of the 2012 annual PM<sub>2.5</sub> NAAQS in any other state for the following reasons: 1) The one PM<sub>2.5</sub> nonattainment area within the state, the Libby 1997 PM<sub>2.5</sub> nonattainment area, monitors PM<sub>2.5</sub> values which attain the 2012 PM<sub>2.5</sub> NAAQS; 2) Elevated levels of PM<sub>2.5</sub> in the state which can occur during the wintertime are highly dependent on low wind speed and meteorological "inversions" that lead to limited vertical mixing, resulting in neighborhood-scale impacts that are unlikely to contribute to elevated PM<sub>2.5</sub> levels in other states; and 3) The evidence indicates that Montana does not contribute to elevated emissions at the only area designated nonattainment for the 2012 PM<sub>2.5</sub> NAAQS with close proximity to the state, the West Silver Valley in Shoshone County, Idaho. Montana cited the EPA's technical

support document on the West Silver Valley, Idaho nonattainment area designation, <sup>13</sup> which indicated that residential wood combustion within the West Silver Valley during wintertime periods of low wind speeds and low mixing height was the primary cause of the PM<sub>2.5</sub> issues in that area. Montana also noted winds into the West Silver Valley tend to be westerly, and that the Bitterroot and Coeur D'Alene mountain ranges run along the western border of Montana between the state and the West Silver Valley nonattainment area. Montana asserted that all of these considerations combined made it unlikely that emissions from Montana sources will contribute significantly to nonattainment or interfere with maintenance in the West Silver Valley, Idaho area.

The EPA notes that, because Montana's analysis focused on designated nonattainment areas, it does not independently address whether the SIP contains adequate provisions prohibiting emissions that will interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS in any other state. While Montana's submittal pre-dates the 2016 Memo, which provided the states with information about potential maintenance-only receptors, Montana was still required to evaluate the potential impact of its emissions on areas that are currently measuring clean data, but that may have issues maintaining that air quality, and Montana did not do so.

The EPA reviewed the information in Montana's submittal, as well as the 2016 Memo and additional supplemental information for our evaluation, and we propose to come to the same conclusion as the state. This includes Montana's conclusion that the state will not interfere with maintenance in downwind states, because we supplemented the state's analysis by identifying

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 $<sup>^{13}</sup>$  See "Idaho: West Silver Valley Nonattainment Area- 2012 Primary Annual PM $_{2.5}$  National Ambient Air Quality Standard Technical Support Document" in the docket for this action.

and assessing impacts on potential maintenance receptors. In our evaluation, we identified potential downwind nonattainment and maintenance receptors using the 2016 Memo. We then evaluated these receptors to determine whether Montana emissions could significantly contribute to nonattainment or interfere with maintenance at them. Below, we provide an overview of our analysis. A more detailed evaluation of how the SIP revisions meet the requirements of CAA section 110(a)(2)(D)(i) may be found in the TSD.

With regard to the Shoshone County, Idaho receptor, our analysis indicated that elevated PM<sub>2.5</sub> levels in the area are driven primarily by local emissions from wood burning in the wintertime during inversion conditions, and therefore are not driven by transported emissions.<sup>14</sup> Monitoring data also indicate that the air in remote areas in western Montana and throughout the region is well below the level of the 2012 PM<sub>2.5</sub> NAAQS, especially during the winter months when PM<sub>2.5</sub> levels at the Shoshone County receptor are highest.<sup>15</sup> Additionally, the predominant wind direction in Shoshone County is from the west, while Montana is located to the east, making transport of emissions from Montana to this receptor unlikely. Finally, the intervening topography of the Bitterroot and Coeur D'Alene mountain ranges would impede interstate pollution transport. These factors, which are also discussed in Montana's analysis and further examined by the EPA in a TSD for this action,<sup>16</sup> indicate that emissions from Montana will not significantly contribute to nonattainment or interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS at the projected Shoshone County receptor.

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<sup>&</sup>lt;sup>14</sup> Id

<sup>&</sup>lt;sup>15</sup> See Id. at 13, as well as "IMPROVE data 2013-2015," in the docket for this action.

<sup>&</sup>lt;sup>16</sup> The TSD for the Montana portion of this rulemaking can be found in the docket for this action.

With regard to the 17 California receptors, our analysis showed that elevated PM<sub>2.5</sub> levels in California are driven primarily by local emissions.<sup>17</sup> Additionally, Montana is more than 630 miles to the northeast and generally downwind of the California receptors, with several intervening mountain ranges which tend to impede interstate pollution transport. Finally, monitoring data demonstrate that the air in remote areas between Montana and California is well below the level of the 2012 PM<sub>2.5</sub> NAAQS. All of these factors indicate that emissions from Montana will not significantly contribute to nonattainment or interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS at any California projected receptors.

With regard to the Allegheny County, Pennsylvania receptor, our analysis included review of previous modeling data conducted for the EPA's 2011 CSAPR. The 2011 CSAPR modeling did not project downwind contribution of emissions from Montana, but projected contributions from states immediately east of Montana, including North Dakota. This modeling indicated that North Dakota, a state located much closer to the Allegheny County receptor and with higher PM<sub>2.5</sub> precursor emissions than Montana, <sup>19</sup> was modeled to be below 1% of the 2012 annual PM<sub>2.5</sub> NAAQS at all receptors in the eastern U.S., including the Allegheny County receptor. Additionally, the modeling information contained in the EPA's 2016 Memo shows that the Allegheny County receptor is projected to both attain and maintain the NAAQS by 2025. These factors, in addition to the very large distance (1,267 miles) from the Allegheny County

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<sup>&</sup>lt;sup>17</sup> See "California: Imperial County, Los Angeles-South Coast Air Basin, Plumas County, San Joaquin Valley Area Designations for the 2012 Primary Annual PM<sub>2.5</sub> National Ambient Air Quality Standard Technical Support Document" in the docket for this action.

<sup>&</sup>lt;sup>18</sup> See Table V.D-1 in the EPA's Cross-State Air Pollution Rule (CSAPR) (August 8, 2011), at 76 FR 48240.

<sup>&</sup>lt;sup>19</sup> See Tables 7-1 and 7-2 in "Emissions Inventory Final Rule Technical Support Document (TSD)" for CSAPR, June 28, 2011, Document number EPA-HQ-OAR-2009-0491-4522 in www.regulations.gov.

receptor to Montana's eastern border, indicate that emissions from Montana will not significantly contribute to nonattainment or interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS at the projected Allegheny County receptor.

Based on our analyses, the EPA is proposing to approve the SIP submittal as meeting the CAA section 110(a)(2)(D)(i)(I) requirement that Montana emissions will not contribute significantly to nonattainment or interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS in any other state.

North Dakota: North Dakota concluded that it does not contribute significantly to nonattainment or interfere with maintenance of the 2012 annual PM<sub>2.5</sub> NAAQS in any other state for the following reasons: 1) There are no PM<sub>2.5</sub> nonattainment areas within North Dakota; 2) The nearest 2012 PM<sub>2.5</sub> nonattainment area, in Shoshone County, Idaho, is roughly 660 miles west of the western border of North Dakota. Given that the three PM<sub>2.5</sub> monitors in western North Dakota indicate very low annual PM<sub>2.5</sub> levels, and the wind in the western U.S. is generally westerly, any PM<sub>2.5</sub> contribution from North Dakota to the nearest nonattainment area would be insignificant; 3) The modeling conducted for the EPA's CSAPR (August 8, 2011, 76 FR 48208) indicated that North Dakota sources have a maximum annual average contribution to any nonattainment area of .06 μg/m³, and a maximum contribution of .04 μg/m³ to any maintenance receptor in the Eastern U.S.; 4) Annual PM<sub>2.5</sub> monitor values throughout North Dakota are all well below the 2012 PM<sub>2.5</sub> NAAQS; and 5) Direct and precursor emissions of PM<sub>2.5</sub> have been steadily declining in North Dakota for years. Between 2004-2014, NOx emissions in the state decreased by 36%, SO<sub>2</sub> emissions decreased by 64%, and primary

particulate emissions from major point sources decreased by 19%, with further anticipated reductions due to North Dakota's Regional Haze requirements.

The EPA reviewed the information in North Dakota's submittal, as well as the 2016 Memo and additional supplemental information for our evaluation, and we propose to come to the same conclusion as the state. In our evaluation, we identified potential downwind nonattainment and maintenance receptors using the 2016 Memo. We then evaluated these receptors to determine whether North Dakota emissions could significantly contribute to nonattainment or interfere with maintenance at them. Below, we provide an overview of our analysis. A more detailed evaluation of how the SIP revisions meet the requirements of CAA section 110(a)(2)(D)(i) may be found in the North Dakota TSD.

With regard to the 17 California receptors, our analysis showed that elevated PM<sub>2.5</sub> levels in California are driven primarily by local emissions.<sup>20</sup> Additionally, North Dakota is more than 1,030 miles to the east and generally downwind of the California receptors, with several intervening mountain ranges which tend to impede interstate pollution transport. Finally, monitoring data demonstrate that the air in remote areas between North Dakota and California is well below the level of the 2012 PM<sub>2.5</sub> NAAQS. All of these factors indicate that emissions from North Dakota will not significantly contribute to nonattainment or interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS at any California projected receptors.

With regard to the Shoshone County, Idaho receptor, our analysis showed that elevated  $PM_{2.5}$  levels in the area are driven primarily by local emissions from wood burning in the

Document: in the docket for this action.

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<sup>&</sup>lt;sup>20</sup> See "California: Imperial County, Los Angeles-South Coast Air Basin, Plumas County, San Joaquin Valley Area Designations for the 2012 Primary Annual PM<sub>2.5</sub> National Ambient Air Quality Standard Technical Support

wintertime.<sup>21</sup> Additionally, North Dakota is more than 500 miles to the east and downwind of this receptor. Finally, monitoring data indicate that the air in remote areas between North Dakota and the Shoshone County receptor is well below the level of the 2012 PM<sub>2.5</sub> NAAQS. All of these factors indicate that emissions from North Dakota will not significantly contribute to nonattainment or interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS at the projected Shoshone County receptor.

With regard to the Allegheny County, Pennsylvania receptor, our analysis included review of previous modeling data conducted for the EPA's 2011 CSAPR.<sup>22</sup> As noted, this modeling projected North Dakota's impact at all receptors in the eastern U.S., including the Allegheny County receptor, and that impact was modeled to be well below 1% of the 2012 annual PM<sub>2.5</sub> NAAQS at all receptor locations.<sup>23</sup> Additionally, the modeling information contained in EPA's 2016 Memo shows that the Allegheny County receptor is projected to both attain and maintain the NAAQS by 2025. These factors, in addition to the very large distance (925 miles) from the Allegheny County receptor to North Dakota's eastern border, indicate that emissions from North Dakota will not significantly contribute to nonattainment or interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS at the projected Allegheny County receptor.

Based on these analyses, the EPA is proposing to approve the SIP submittal as meeting the CAA section 110(a)(2)(D)(i)(I) requirement that North Dakota emissions will not contribute

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<sup>&</sup>lt;sup>21</sup> See "Idaho: West Silver Valley Nonattainment Area- 2012 Primary Annual PM<sub>2.5</sub> National Ambient Air Quality Standard Technical Support Document" in the docket for this action.

<sup>&</sup>lt;sup>22</sup> See Table V.D-1 in the EPA's Cross-State Air Pollution Rule (CSAPR) (August 8, 2011), at 76 FR 48240.

<sup>&</sup>lt;sup>23</sup> Id.

significantly to nonattainment or interfere with maintenance of the 2012  $PM_{2.5}$  NAAQS in any other state.

South Dakota: South Dakota concluded that it does not contribute significantly to nonattainment or interfere with maintenance of the 2012 annual PM<sub>2.5</sub> NAAQS in any other state for the following reasons: 1) There are no 2012 PM<sub>2.5</sub> nonattainment or maintenance areas within South Dakota or neighboring states; 2) Source-oriented PM<sub>2.5</sub> emissions are low throughout South Dakota; 3) Existing programs in the South Dakota SIP will prevent new or modified sources from causing nonattainment in South Dakota or contributing significantly to nonattainment or maintenance with this NAAQS in neighboring states; and 4) South Dakota has a small population.

The EPA notes that, because South Dakota's analysis focused on designated nonattainment areas, it does not independently address whether the SIP contains adequate provisions prohibiting emissions that will interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS in any other state. While South Dakota's submittal pre-dates the 2016 Memo, which provided the states with information about potential maintenance-only receptors, South Dakota was still required to evaluate the potential impact of its emissions on areas that are currently measuring clean data, but that may have issues maintaining that air quality, and South Dakota did not do so.

The EPA reviewed the information in South Dakota's submittal, as well as the 2016 Memo and additional supplemental information for our evaluation, and we propose to come to the same conclusion as the state. This includes South Dakota's conclusion that the state will not interfere with maintenance in downwind states, because we supplemented the state's analysis by identifying and assessing impacts on potential maintenance receptors. In our evaluation, we

identified potential downwind nonattainment and maintenance receptors using the 2016 Memo. We then evaluated these receptors to determine whether South Dakota emissions could significantly contribute to nonattainment or interfere with maintenance at them. Below, we provide an overview of our analysis. A more detailed evaluation of how the SIP revisions meet the requirements of CAA section 110(a)(2)(D)(i) may be found in the South Dakota TSD.

With regard to the 17 California receptors, our analysis showed that elevated PM<sub>2.5</sub> levels in California are driven primarily by local emissions.<sup>24</sup> Additionally, South Dakota is more than 937 miles to the northeast and generally downwind of the California receptors. Finally, monitoring data demonstrate that the air in remote areas between South Dakota and California is well below the level of the 2012 PM<sub>2.5</sub> NAAQS. All of these factors indicate that emissions from South Dakota will not significantly contribute to nonattainment or interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS at any California projected receptors.

With regard to the Shoshone County, Idaho receptor, our analysis showed that elevated PM<sub>2.5</sub> levels in the area are driven primarily by local emissions from wood burning in the wintertime.<sup>25</sup> Additionally, South Dakota is more than 600 miles to the east and downwind of this receptor. Finally, monitoring data indicate that the air in remote areas between South Dakota and the Idaho receptor is well below the level of the 2012 PM<sub>2.5</sub> NAAQS. All of these factors indicate that emissions from South Dakota will not significantly contribute to nonattainment or

<sup>&</sup>lt;sup>24</sup> See "California: Imperial County, Los Angeles-South Coast Air Basin, Plumas County, San Joaquin Valley Area Designations for the 2012 Primary Annual PM<sub>2.5</sub> National Ambient Air Quality Standard Technical Support Document" in the docket for this action.

<sup>&</sup>lt;sup>25</sup> See "Idaho: West Silver Valley Nonattainment Area- 2012 Primary Annual PM<sub>2.5</sub> National Ambient Air Quality Standard Technical Support Document" in the docket for this action.

interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS at the projected Shoshone County receptor.

With regard to the Allegheny County, Pennsylvania receptor, our analysis included review of previous modeling data conducted for the EPA's 2011 CSAPR.<sup>26</sup> This modeling projected South Dakota's impact at all receptors in the eastern U.S., including the Allegheny County receptor, and that impact was modeled to be well below 1% of the 2012 annual PM<sub>2.5</sub> NAAQS at all receptor locations.<sup>27</sup> Additionally, the modeling information contained in the EPA's 2016 Memo shows that the Allegheny County receptor is projected to both attain and maintain the NAAQS by 2025. These factors, in addition to the very large distance (880 miles) from the Allegheny County receptor to South Dakota's eastern border, indicate that emissions from South Dakota will not significantly contribute to nonattainment or interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS at the projected Allegheny County receptor.

Based on these analyses, the EPA is proposing to approve the SIP submittal as meeting the CAA section 110(a)(2)(D)(i)(I) requirement that South Dakota emissions will not contribute significantly to nonattainment or interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS in any other state.

**Wyoming:** Wyoming concluded that it does not contribute significantly to nonattainment or interfere with maintenance of the 2012 annual PM<sub>2.5</sub> NAAQS in any other state for the following reasons: 1) There are no PM<sub>2.5</sub> nonattainment areas within Wyoming, and all PM<sub>2.5</sub> monitors in the state indicate levels well below the NAAQS in spite of certain maximum

<sup>&</sup>lt;sup>26</sup> See Table V.D-1 in the EPA's Cross-State Air Pollution Rule (CSAPR) (August 8, 2011), at 76 FR 48240.

values being influenced by wildfires; 2) There are no 2012 PM<sub>2.5</sub> nonattainment areas in states bordering Wyoming apart from Idaho; and 3) The evidence indicates that Wyoming does not contribute to elevated emissions at the only area designated nonattainment for the 2012 PM<sub>2.5</sub> NAAQS with close proximity to the state, the West Silver Valley in Shoshone County, Idaho. This nonattainment area is over 300 miles from the nearest border of Wyoming, and wind roses within Wyoming show that winds primarily blow west-to-east, and do not favor southeast-tonorthwest transport needed for Wyoming emissions to impact this nonattainment area. The monitored PM<sub>2.5</sub> values in the Wyoming counties nearest the West Silver Valley, Idaho nonattainment area are well below the NAAQS. Wyoming also cited the EPA's technical support document on the West Silver Valley, Idaho, nonattainment area designation, <sup>28</sup> which indicated that residential wood combustion and prescribed burning within the West Silver Valley were the primary causes of PM<sub>2.5</sub> issues in that area. Wyoming also stated that the Beaverhead, Lemhi, Teton and Gallatin mountain ranges also inhibited westward transport between Wyoming and the West Silver Valley, Idaho nonattainment area. Wyoming asserted that all of these considerations combined made it reasonable to conclude that emissions from Wyoming sources are not significantly contributing to nonattainment in the West Silver Valley, Idaho area.

The EPA notes that, because Wyoming's analysis focused on designated nonattainment areas, it does not independently address whether the SIP contains adequate provisions prohibiting emissions that will interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS in any other state. Each state is required to evaluate the potential impact of its emissions on areas that

 $<sup>^{28}</sup>$  See "Idaho: West Silver Valley Nonattainment Area- 2012 Primary Annual PM $_{2.5}$  National Ambient Air Quality Standard Technical Support Document" in the docket for this action.

are currently measuring clean data, but that may have issues maintaining that air quality, and Wyoming did not do so.

The EPA reviewed the information in Wyoming's submittal, as well as the 2016 Memo and additional supplemental information for our evaluation, and we propose to come to the same conclusion as the state. This includes Wyoming's conclusion that the state will not interfere with maintenance in downwind states, because we supplemented the state's analysis by identifying and assessing impacts on potential maintenance receptors. In our evaluation, we identified potential downwind nonattainment and maintenance receptors using the 2016 Memo. We then evaluated these receptors to determine whether Wyoming emissions could significantly contribute to nonattainment or interfere with maintenance at them. Below, we provide an overview of our analysis. A more detailed evaluation of how the SIP revisions meet the requirements of CAA section 110(a)(2)(D)(i) may be found in the Wyoming TSD.

With regard to the Shoshone County, Idaho receptor, our analysis showed that elevated PM<sub>2.5</sub> levels in the area are driven primarily by local emissions from wood burning in the wintertime during inversion conditions, and therefore are not driven by transported emissions.<sup>29</sup> Additionally, monitoring data indicate that the air in remote areas between Wyoming and the Idaho receptor is well below the level of the 2012 PM<sub>2.5</sub> NAAQS. These factors indicate that emissions from Wyoming will not significantly contribute to nonattainment or interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS at the projected Shoshone County receptor.

<sup>&</sup>lt;sup>29</sup> Id.

With regard to the 17 California receptors, our analysis showed that elevated PM<sub>2.5</sub> levels in California are driven primarily by local emissions.<sup>30</sup> Additionally, Wyoming is more than 548 miles to the east and generally downwind of the California receptors, with several intervening mountain ranges which tend to impede interstate pollution transport. Finally, monitoring data demonstrate that the air in remote areas between Wyoming and California is well below the level of the 2012 PM<sub>2.5</sub> NAAQS. All of these factors indicate that emissions from Wyoming will not significantly contribute to nonattainment or interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS at any California projected receptors.

With regard to the Allegheny County, Pennsylvania receptor, our analysis included review of previous modeling data conducted for the EPA's 2011 CSAPR.<sup>31</sup> The 2011 CSAPR modeling did not project contribution of emissions from Wyoming, but projected contributions from states immediately east of Wyoming, including Nebraska. This modeling indicated that Nebraska, a state located much closer to the Allegheny County receptor and with higher PM<sub>2.5</sub> precursor emissions than Wyoming,<sup>32</sup> was modeled to be below 1% of the 2012 annual PM<sub>2.5</sub> NAAQS at all receptors in the eastern U.S., including the Allegheny County receptor. Additionally, the modeling information contained in the EPA's 2016 Memo shows that the Allegheny County receptor is projected to both attain and maintain the NAAQS by 2025. These factors, in addition to the very large distance (1,260 miles) from the Allegheny County receptor

<sup>&</sup>lt;sup>30</sup> See "California: Imperial County, Los Angeles-South Coast Air Basin, Plumas County, San Joaquin Valley Area Designations for the 2012 Primary Annual PM<sub>2.5</sub> National Ambient Air Quality Standard Technical Support Document" in the docket for this action.

<sup>&</sup>lt;sup>31</sup> See Table V.D-1 in the EPA's Cross-State Air Pollution Rule (CSAPR) (August 8, 2011), at 76 FR 48240.

<sup>&</sup>lt;sup>32</sup> See Tables 7-1 and 7-2 in "Emissions Inventory Final Rule Technical Support Document (TSD)" for CSAPR, June 28, 2011, Document number EPA-HQ-OAR-2009-0491-4522 in www.regulations.gov.

to Wyoming's eastern border, indicate that emissions from Wyoming will not significantly contribute to nonattainment or interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS at the projected Allegheny County receptor.

Based on these analyses, the EPA is proposing to approve the SIP submittal as meeting the CAA section 110(a)(2)(D)(i)(I) requirement that Wyoming emissions will not contribute significantly to nonattainment or interfere with maintenance of the  $2012 \text{ PM}_{2.5} \text{ NAAQS}$  in any other state.

# IV. Proposed Action

The EPA is proposing to approve the following submittals as meeting the interstate transport requirements of CAA section 110(a)(2)(D)(i)(I) for the 2012 PM<sub>2.5</sub> NAAQS: Colorado's December 1, 2015 submittal; Montana's December 17, 2015 submittal; North Dakota's August 23, 2015 submittal; South Dakota's January 25, 2016 submittal; and Wyoming's June 24, 2016 submittal. The EPA is proposing this approval based on our review of the information and analysis provided by each state, as well as additional relevant information, which indicates that in-state air emissions will not contribute significantly to nonattainment or interfere with maintenance of the 2012 PM<sub>2.5</sub> NAAQS in any other state. This action is being taken under section 110 of the CAA.

## V. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, these proposed actions merely

approve state law as meeting federal requirements and do not impose additional requirements beyond those imposed by state law. For that reason, these proposed actions:

- are not significant regulatory actions subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Are not Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory actions because SIP approvals are exempted under Executive Order 12866;
- do not impose an information collection burden under the provisions of the Paperwork
   Reduction Act (44 U.S.C. 3501 et seq.);
- are certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.);
- do not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- do not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- are not economically significant regulatory actions based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- are not significant regulatory actions subject to Executive Order 13211 (66 FR 28355, May 22, 2001);

• are not subject to requirements of Section 12(d) of the National Technology Transfer and

Advancement Act of 1995 (15 U.S.C. 272 note) because application of those

requirements would be inconsistent with the CAA; and

do not provide the EPA with the discretionary authority to address, as appropriate,

disproportionate human health or environmental effects, using practicable and legally

permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, these SIPs are not approved to apply on any Indian reservation land or in any

other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In

those areas of Indian country, the rule does not have tribal implications and will not impose

substantial direct costs on tribal governments or preempt tribal law as specified by Executive

Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference,

Intergovernmental relations, Nitrogen dioxide, Particulate Matter, Reporting and recordkeeping

requirements, Sulfur dioxide, Volatile organic compounds.

**Authority**: 42 U.S.C. 7401 *et seq.* 

Dated: \_\_\_\_May 4, 2018.

Douglas Benevento,

Regional Administrator,

Region 8.

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